EFFECTIVENESS OF PLAY THERAPY ON LEVEL OF ANXIETY AMONG CHILDREN UNDERGOING NEBULIZATION IN SELECTED HOSPITALS, SALEM.

By

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CERTIFICATE

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ABSTRACT

A study was done to evaluate the effectiveness of play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem. Quasi experimental post test only control group design was adopted where purposive sampling technique was used to select the 30 children between 1-5 years of age from Sri Gokulam hospital (experimental group) and SKS hospital (control group), Salem. Play therapy was provided to the experimental group before and during the nebulization and in the control group no distraction was implemented. Post test level of anxiety was assessed in both groups with the help of Modified Spence Children Anxiety Scale. Data was collected from 29-07-2013 to 27-08-2013. Data was analyzed by using descriptive and inferential statistics. During post test on experimental group, 11(36.7%) children had no anxiety and 19(63.3%) had mild anxiety whereas in control group 25(83.3%) children had moderate anxiety and 5(16.7%) had severe anxiety. In experimental group, the post test mean percentage was 27.5% and in control group the mean percentage was 58.4% revealing a difference of 30.9%. Significant difference was found in the post test mean values of level of anxiety ($t=16.5$) at $p<0.001$ in experimental group. In experimental group there was no association of anxiety with the demographic variables whereas in control group there was an association of anxiety with education of care giver and previous exposure to hospital at $p<0.05$ level. This study implies that play therapy was an effective intervention in reducing the level of anxiety among children undergoing nebulization therapy.

CHAPTER – I

INTRODUCTION

"Play is a child's natural medium for self-expression"

- Virgina Anline

Anxiety is a common experience to all of us on an almost daily basis. In children between 1-5 years of age, feeling anxious is normal and can range from very low levels to such high levels that may affect their social, personal and academic performance. Anxiety can arise from real or imagined circumstances. **(Thomas.J.Huberty, 2010)**

A child's conception of illness is more than age and intellectual maturity in predicting the level of anxiety because of hospital environment. Under five children may express anxiety and fear before or during hospital procedures. Children's memories are vital that influence the level of anxiety among children during medical procedures. Children and their families require component and sensitive care to minimize effects of anxiety and also to promote positive benefits from the experience so in younger children, caregiver's behaviour and approach towards child during the procedure will minimize the level of anxiety. **(Hockenberry.J.Marilyn, 2007)**

Cough and cold are very common in young children. If cough is severe it can lead to difficulties in breathing and other respiratory ailments. Most of children who have asthma will have increased symptoms when they have colds. Many infants only have wheezing when they have viral respiratory infections. In young children coughing, wheezing and shortness of breath may also accompany crying, yelling and laughing. Emotions such as anger, frustration and anxiety can indirectly aggravate symptoms. If the child is suffering from any kind of respiratory disorders would suggest the nebulization treatment. **(WHO, 2010)**

Nebulization is good option for the child if he or she has severe cough, continuous wheeze, asthma and chest congestion problems etc. If the kid having any type of respiratory ailments then he\she must go for nebulization. It is a treatment in which the medication is vaporized and inhaled in to the lungs through a mask or mouthpiece. It helps the child by loosening the mucus in his lungs so he can cough it up more easily. In this way the child also relaxes the airway muscles so that more air can move in and out of the lungs. Lungs medications work best when they are inhaled in the form of fine mist. It is the most effective asthma treatment for infants and toddlers. **(Wikipedia, 2012)**

Hospital environment will produce a frightening experience to the child that will lead to lack of cooperation during medical procedures. Play therapy is an effective way to prepare the child for nebulization. It will help to reduce the anxiety among young children regarding nebulization and other hospital procedures. In play therapy the children enter to a dynamic relationship with the therapist that enables them to express, explore and make sense of their negative experiences. Play therapy during nebulization will help the child to reduce the fear and also improves the positive feeling towards nebulization therapy. **(Frederic F little, 2011)**

Play is a child's way of living. Play therapy is most often used with children between the ages of 3-10 although it can be useful with some older children. It is one of childhood's most effective tools for mastering stress and anxiety. A child's conception of illness is more important than age and intellectual maturity in predicting the level of hospitalization. Play can help a child for intrusive and medical procedures. Children who are in hospital require recreational play because illness and hospitalization constitute crisis in a child's life. Children need to play out their fears and anxieties as a means of coping with these stressors. The nurse incorporates play

activities in to the daily life of each paediatric patient because play is a part of the child's total needs. Play helps to achieve cooperation during the clinical procedures on child. Toys are the inanimate objects with which children interact and cognitive development may take place. **(Jacob, 2007)**

Toys are the tools of play and provide a more "natural" environment for a child. The proper selection and use of toys can reduce the traumatic effects of a hospitalization experiences and aid in the recovery phase of illness. One of the main reasons why play therapy works with young children is because it feels natural to them, play is not something they need to learn how to do. It is unrealistic for verbalize thoughts and emotions because children do not have the abstract reasoning skills that allow them to do so. Children are able to understand concepts that they receive from others of verbalizing this information. **(Kothari, 2005).**

Need for the Study:

Total number of children in the age-group of 1-6 years are 16,87,89,286(158.8 million) in India. 13.12% of the population in India is between 0-6 years of age. This is also 2.8% lower than last year census.(**WHO report,2013**)

Childhood upper respiratory tract infection is a very common condition affecting young children. Its prevalence varies widely from country to country. At the age of 1to 10 years, the prevalence ranges from 4-32%. The United Kingdom has the highest prevalence of severe respiratory tract problems in the world. **(Arlene M Buzz, 2012)**

Every year five million under five children are affected with respiratory tract infection. The prevalence of worldwide upper respiratory tract infection is being reported with increase in wheeze at an alarming rate of 10% per year. In India upper respiratory tract infection is a common disease among children with the prevalence

estimated at 5- 10 %. Results show that 12-month of prevalence in wheeze varied between the range of 4.1-32.1% among the age group of 1-10 years. **(WHO, 2012)**

Anxiety in children among 3-10 years is the most commonly experienced presenting problem in hospital environment. It is speculated that as much as 12-20% of children seen in the hospital settings suffer from extremes of anxious, nervous manifestations. **(Knell & Dasari, 2011)**

The prevalence of procedural anxiety ranges for the individuals aged 1-6 years is 4.1- 4.7 % and 7- 11 years is 2-4 %. The prevalence rate of children who have anxiety is 43%, and disruptive behaviour disorder is 27%. **(WHO, 2011)**

India has the largest population of youths, it also true that our country has the dubious distinction of higher mortality rate among children less than five years of age. Among 13.2% of population, 3 million children under the age of 5 years are affecting with respiratory tract infection in each year. Experts say that at least 2, 00,000 kids die of this disease every year in India. India accounts for almost 40% of worldwide childhood asthma cases. According to states of world's children report' by UNICEF, more than 1000 children under the age of five die of severe respiratory tract infections every day in India. Tamilnadu also has recorded the highest number of cases in every year. **(International Statistics, 2011)**

The prevalence of asthma, the most common long-term disease of childhood, significantly increased in children aged 1 to 14 years. Statistics concerning the prognosis of asthma are as variable as the frequency, severity and duration of attack in affected children. Over thirty percent of children experience the wheezing illness during the first half of their life. Current National Asthma Education Prevention Program guidelines recommend nebulizer use for children was very effective for asthma and common upper respiratory tract infections. Recent trends in asthma care

encourage early initiation of nebulizer for relief of acute, severe symptoms, especially in young children, to decrease visits and hospitalization. **(NAEPP, 2011)**

Nebulizer has been used for many years in wheezing for children, surveys indicate that the understanding of their use by children, caregivers and health care providers is inadequate. The education of children, caregivers and those involved in prescribing, supplying and supervising nebulizer therapy is essential to ensure optimal therapy. The acceptability of nebulizer therapies was assessed in a recent survey. A total of 988 children who used a nebulizer as an asthma treatment. Patients younger than 12 years comprised 81% of responders, of which 21% were younger than 4 years. Nebulizer therapy was prescribed for these patients for various reasons: (1) to reduce or eliminate hospitalizations or emergency department visits (56%); (2) to treat symptoms that did not respond (33%); and (3) because the patients were infants or preschool-aged children (36%). Ease of use, portability, noise, time and electrical access were identified as challenges associated with nebulizer/compressor system use by patients and caregivers. Most asthmatic children and caregivers reported that they recognized the value of the nebulizer and depended on nebulizer therapy for the treatment of asthma symptoms and prevention of emergency department visits. **(Martin Joyce Brady, 2010)**

Hospital procedures may cause anxiety and stress at any age. Fear of the unknown like medical equipments, strangers, and new environment is always threatening for a child. The child who faces hospitalization is no exception for anxiety. Children are often too young to understand what is happening or afraid to ask question during hospital procedures. When the children have a wheezing attack, they are often scared. The stronger the asthma attack, the more the fear. Studies done with children have shown that this fear can make wheezing or asthma worse. Fear is the

major cause for hyperventilation. Thus the asthma treatment can be incorporated as a play. It would be interesting, fun as well as therapeutic for an asthmatic child. Planned play period expressed more positive feelings towards children. **(Marks. M.G, 2009)**

Guided medical play during the time of nebulization allows the teacher to scaffold the learning of the child to incorporate higher levels to understanding. It also provides a vehicle for a child's self expression and is a way for children to communicate verbally. Medical play is guided by the health professional to meet the physical and psychological needs of the child. Because play is the language of children, children who have difficulty in putting their thoughts in words can often speak clearly through play therapy. Model play helps to reduce the anxiety and emotional stress because of various medical procedures. Creative play is used for those children who are angry or fearful to act out their feelings. **(Watkins RV, 2008)**

Medical play is the one of the most powerful and most of effective tool used to reduce tension, anger, frustration, conflict and anxiety, which is accompanied by the loss of control and self esteem at the time of medical procedures. Play can help the hospitalized child better understand and interpret the imagery, sights, sounds and the language of the hospital. When a child plays, he transforms himself from a passive individual to an active one because through play he creates the rules, lets his imagination and feelings run free, enjoys himself, feels liberated and as result he can express past unpleasant experiences, achieve a sense of integrity and self esteem ,and exhibit his feelings and thoughts through expressive behaviour. Through medical play the child can express his negative feelings successfully. **(Garot, 2007)**

The above mentioned literatures of children's procedural anxiety which shows the growth of anxiety among children regarding medical procedures stimulated the investigator. Above all the investigator found during her clinical experience most of

the under five children were affected by upper respiratory tract infection and were undergoing nebulization. They were found to be anxious and not co operative during the procedure. So the investigator felt that play therapy would promote their cooperation and reduce their anxiety at the time of nebulization.

Statement of the Problem:

A Study to Assess the Effectiveness of Play Therapy on Level of Anxiety among Children Undergoing Nebulization in Selected Hospitals, Salem.

Objectives:

1. To assess the post test level of anxiety among children undergoing nebulization in experimental group and control group.
2. To evaluate the effectiveness of play therapy on level of anxiety among children undergoing nebulization in experimental group and control group.
3. To associate the level of anxiety among children undergoing nebulization with their selected demographic variables in experimental and control group.

Operational Definition:

Effectiveness:

It is the reduction of anxiety level during nebulization after implementation of play therapy among children (1-5 years of age) determined by significant difference in anxiety scores of children in experimental and control group as observed by modified Spence children anxiety scale

Play therapy:

Play defines as an opposition to work. Which is often called the work of children. Play therapy represents a unique form of treatment, where the concept of play is used as diversion. Here play therapy is the dynamic process between child and

play therapist where an audio visual play model of treatment device (Nebulizer) is used to distract the child and remove his/her fear towards the treatment.

Level of anxiety:

It is an unpleasant feeling associated with uneasiness, apprehension, fear of worry during nebulization ranging from mild to severe anxiety measured using Modified Spence Children Anxiety scale.

Children:

Refers to children (1-5 years of age) undergoing nebulization for the first time. Both male and female children were included in this study.

Nebulization:

It is a process of dispersing liquid in to microscopic particles (aerosol)and delivering in to lungs as patient inhales .The medication may be given with or without oxygen to carry it in to the lungs.

Assumption:

- Children may have anxiety regarding nebulization.
- Play therapy may reduce the level of anxiety during nebulization among children.

Hypotheses:

H_1: There will be a significant difference in level of anxiety among children undergoing nebulization in experimental and control group after implementation of play therapy at $P \leq 0.001$ level.

H_2: There will be significant association between the level of anxiety among children undergoing nebulization in experimental and control group with their selected demographic variables at $P \leq 0.05$ level.

Delimitations:

1. Sample was limited to children belonging to the age group of 1-5 years in selected hospitals.
2. Data collection was limited to only a period of 4 weeks.
3. The sample size was limited to 60.

Projected Outcome:

This study was conducted to evaluate the effectiveness of play therapy on level of anxiety among children during nebulization. Findings of the study will help the nurse to provide play therapy as a way of anxiety management in children undergoing nebulization in hospitals.

Conceptual Framework:

The present study is based on the concept of play therapy on level of anxiety among children undergoing nebulization. The investigator adopted the Widenbach's Helping Art of Clinical Nursing Theory (1964) which describes situation and way to attained. It directs action towards the explicit goals. This theory has three factors.

- Central purpose
- Prescription
- Reality

Central purpose:

It refers to what the nurse wants to accomplish. It is an overall goal towards which a nurse strives. Central purpose of this study is to relieve anxiety among children undergoing nebulization.

Prescription:

It refers to plan of care for a patient. It will specify the nature of action that will fulfill the nurses central purpose.

Reality:

It refers to the physical, psychological, emotional and spiritual factors that come into play in situation involving the nurses.

The five realities identified by Widenbach's are agent, recipient, goal, mean activities and frame work.

According to this theory, nursing practice consist of 3-steps which include.

Step – I: Identifying the need for help.

Step – II: Ministering the needed help.

Step – III: Validating that the need for help was met.

Step-I: Identifying the need for help.

This involves determining the need for help. The investigator identified the children who are at risk of developing anxiety and there is need for helping children undergoing nebulization by providing play therapy.

Step – II: Ministering the needed help

This refers to the provision of required help for the identified need. It has 2 components.

1. Perception
2. Realities

1. Prescription:

It refers to the plan of care to achieve the purpose. This include play therapy for children undergoing nebulization in experimental group with routine nursing care.

2. Realities:

It refers to the factors that come into play in a situation involving nursing actions in the particular situation. It includes.

Agent : The investigator is the agent

Recipient : Recipient are the children undergoing nebulization.

Goal : Refers to relief of anxiety among children undergoing nebulization.

Means & Activities : Play therapy

Framework & facilities: Sri Gokulam Hospital & SKS Hospital.

Step – III: Validating that the need for help was met

This is accomplished by means of the post assessment of level of anxiety among children undergoing nebulization by modified Spence children's anxiety scale. Based on the findings further management modalities are planned.

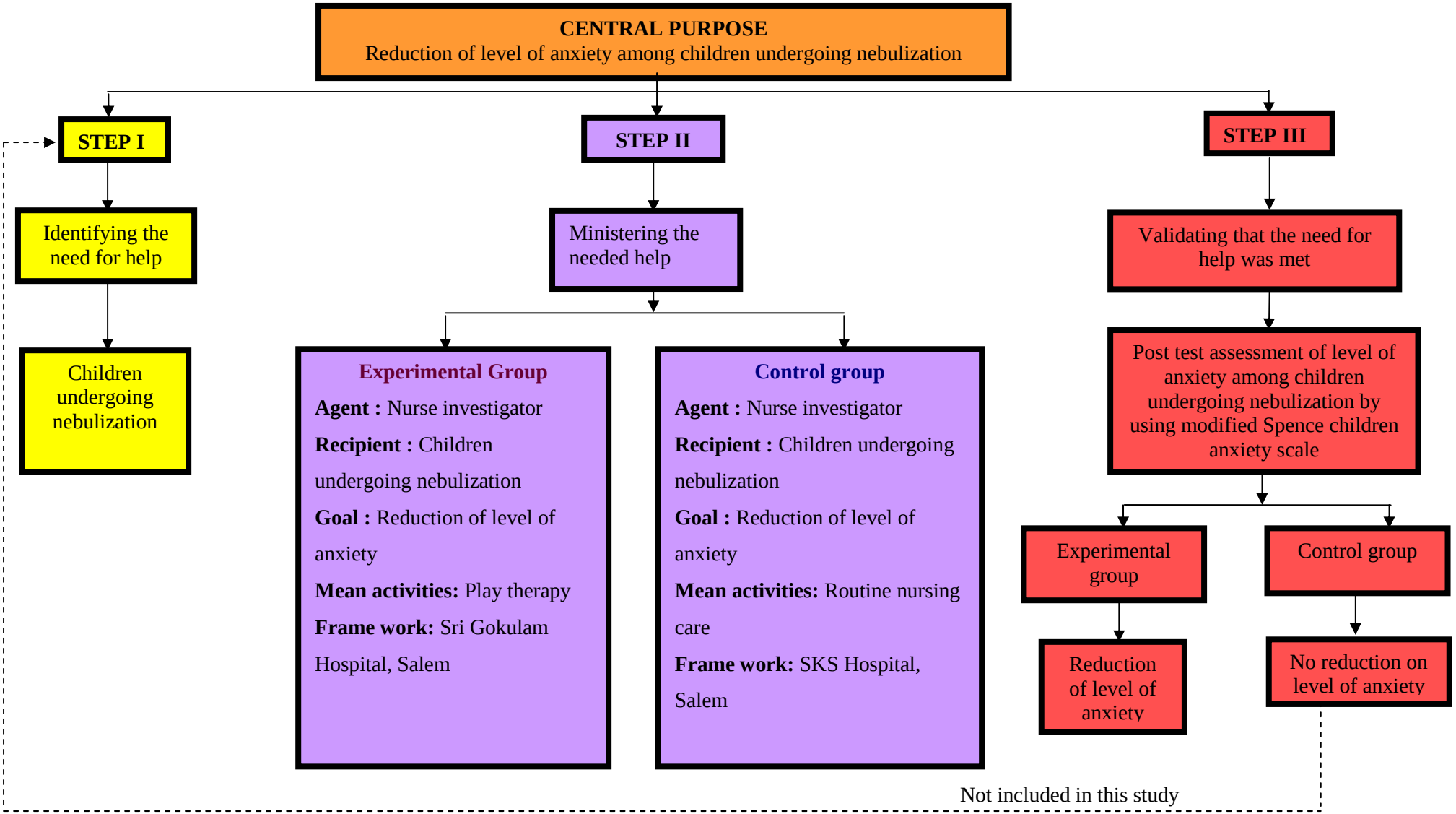


Figure-1.1: Conceptual Framework based on Widenbach's Helping Art of Clinical Nursing Theory (1964) on Effectiveness of Play Therapy on Level of Anxiety among Children Undergoing Nebulization

Summary:

This chapter dealt with introduction, need for study, statement of problem, objectives, operational definitions, assumptions, delimitations, projected out come and conceptual framework.

CHAPTER- II

REVIEW OF LITERATURE

Review of literature is a systematic identification, location, scrutiny and summary of written materials that contains information on research problems.

"Researchers almost never conduct a study in an intellectual vacuum; their studies are undertaken within the context of an existing base knowledge" **(Polit and Hungler, 1999).**

This chapter, literature was reviewed theoretically, empirically and is organized under the following headings,

Section-A: Literature related to play therapy.

Section-B: Literature related to anxiety

Section-C: Studies related to play therapy on anxiety.

Section-D: Studies related to play therapy on level of anxiety during nebulization.

Section-A: Literature related to play therapy.

The use of play therapy was first elucidated by the pioneers of Child Psychotherapy. Anna Freud (1965), Margaret Lowenfeld (1970) and Melanie Klein (1987) posited the theoretical premise for the use of play. Play therapy is the dynamic process between child and Play Therapist in which the child explores at his or her own pace and with his or her own agenda those issues, past and current, conscious and unconscious, that are affecting the child's life in the present. The child's inner resources are enabled by the therapeutic alliance to bring about growth and change. Play Therapy is child-centered, in which play is the primary medium and speech is the secondary medium. **('British Association of Play Therapists (BAPT), 2008)**

Play can be broadly defined as any activity in which children spontaneously engage and find pleasurable. For children in the hospital, specific forms of play can provide an effective venue for personal development and increased well-being. Play therapy refers to specialized activities that are developmentally supportive and facilitate the emotional well-being of a pediatric patient. It is in a less structured way, focuses on the process of play as a mechanism for mastering developmental milestones and critical events such as hospitalization. **(Marlow.R, 2009)**

Play is therapeutic at any change. It provides for release from the tension and stress encountered environment. In play children can express emotion and release unacceptable impulses in a socially acceptable fashion. Play therapy is a form of individual therapy. It allows children the freedom to experience their concerns and fears in a non threatening environment with an accepting and attentive adult. Play therapy is based on the assumption that play is therapeutic. Play therapy becomes the medium by which the child explores life problems, developmental issues and interpersonal conflicts. Play therapy in hospital promotes optimal learning and development provides positive experience and opportunities for enjoyment, distracts from pain and treatment, encourages healing, and enhances self esteem and confidences. It enables communication, creates environment where stress and anxiety are reduced and bridges the gap between home, early childhood centre, school or hospital.**(Terri kyle,2009)**

Play is an instinctive preparation for adulthood. The value of play includes physical development, intellectual development, moral development and socialization. Forms of play include unoccupied play, solitary play, parallel play, associative play and co-operative play. Play therapy in hospital is having an important role in treatment of children. It helps the child to feel more secure in a new environment and

reduce stress. Play helps to achieve co operation during the clinical procedures on child. Toys are the inanimate objects with which children interact and cognitive development may take place. **(Yadav Manoj, 2011)**

Play is the work of child, in play children continually practice the complicated stressful process of living, communicating and achieving satisfactory relationships with other people. Through exploration and manipulation children learns colours, shapes, size, textures and the significance of objects. Play provides a mean to practice and expand language skills. Through play children continuously rehearse past experience to assimilate them into new perceptions and relationships. Play helps children to comprehend and distinguish between fantasy and reality. (**Smith& Dillon, 2011)**

Play is more than just fun it is a powerful way of teaching. Play is beneficial and necessary for all children. Play holds a vital role for children in the crisis situation of being hospitalized. Play as a recreation for fatigue and exhaustion. Play was viewed as relaxation or it alleviates psychological tension. Play is an essential element in the development of healthy individuals. Childhood play is an integral part of the developmental process in young children. It occurs spontaneously in children and gives them an important medium for informal learning. Play is not a purposeless activity, it serving to pass the childhood hours. It is a vital factor in intellectual, social and emotional development. The child's play is the infantile form of the human ability to deal with experience by creating model situations and to master reality by experiment and planning. (**Lazrus & German,2012)**

Section-B: Literature related to anxiety.

Anxiety is an emotion without a specific object. It is provoked by the unknown and precedes all new experiences such as entering new environment, facing

strangers, school etc. All children are naturally emotional and do not know how to deal with their feelings. Anxiety negatively affects social interactions and development of the children. Separation anxiety disorder is excessive anxiety concerning separation from home. . **(Gail.w.stuart2002).**

Anxiety in children is expected and normal at specific time of development. Approximately 8months to 8 years children show intense distress at the time of separation from their parents and unfamiliar environment. Anxiety affects social interactions and development. Relief of anxiety is a basic need and right of children. Children seem to be uncooperative during investigations and medical procedures. The fact is that they are usually anxious and frightened, there by trying to defined themselves as best they can**.(Ellies,2006)**

In the hospital environment, the young children exhibit fewer symptoms of restlessness and irritability. They do exhibit more somatic symptoms such as fear, urinary frequency, temper tantrum, and dizziness. The children between 1-6 years of age are at highest risk for behavioral problems during the time hospital procedures. So, the nurse must support the child in developing effective coping behaviors while in the hospital settings. **(Wong's D L, 2009)**

Young children have to overcome much of their anxiety associated with strangers and the fear of separation. Play promotes healing and helps the child to cope with stressful experiences**.** The attitudes and feelings that children reveal in their play are full of meaning. Every opportunity should be afforded the hospitalized child to use play and other expensive activities to lessen stress, thus promoting healthy resolution of the negative aspects of the hospital experiences. Play activities can help a child to expresses his unconscious feelings. It is a central mechanism in which children cope, communicate, learn and master a traumatic experience such as hospitalization. It can

be provided to the convalescent and immobilized bedridden children when they passed over acute illness at hospital. Play in hospital setting can occur when children are less threatened **(Dutta Parul, 2009)**

In the hospital environment, young children exhibit fewer symptoms of restlessness, hyperactivity and irritability. They do exhibit more somatic symptoms such as vomiting, urinary frequency, diarrhea, and dizziness. Under five are at highest risk for behavioral problems during medical procedures. So, the nurse must support the child in developing effective coping behaviors while in the hospital environment. **(Palmer.M, 2009)**

The physical and psychosocial stress of hospital procedures may influences the child's developmental level, causing behaviour changes, somatic complaints. Through the use of careful developmental assessments, and play techniques, fear can be allayed misconceptions correlated emotionally charged issues addressed and can create self image. Other purposes of play activity helps sick children gradually regain independence through enjoinment of group experiences**. (Landreth, 2011)**

Section-B: Studies related to play therapy on anxiety.

A quasi-experimental study was conducted to assess the effectiveness of play activities in reducing the level of anxiety among hospitalized children in selected hospital at Bangalore, Karnataka. 60 samples were selected by using convenient sampling technique. Data was collected by using hospital observed behaviour check list. The obtained t' value 14.6 statistically was significant at 0.05 level. The mean post test scores was significantly higher than the mean pre-test scores t = $p<0.001$so there was a significant association between findings and the selected demographic variables. The study concluded that in experimental group children's was anxious in the pre-test and were as in the post-test shows that children's was not anxious or

reduced anxiety so, it indicates that play activities was effective method to reduce the anxiety. **(Xavier, 2005)**

An experimental study was conducted to assess the effectiveness of puppet therapy on anxiety among children undergoing cold processor at Liverpool. The subjects were 40 children (6-10years of age), in this 14 male and 26 female children were selected for this study. Stratified random sampling technique was used to select the samples. All participants underwent one or two baseline cold processor trials followed by two distraction trials (puppet therapy). Instrument used for assessing anxiety level was state trait anxiety inventory for children (STAIC). The findings revels that there is a positive reduction in anxiety level of the subjects who undergone puppet therapy (M- 31.74, SD- 4.3, t- 2.19, $p< 0.05$). The study concludes that most of the children had reduction of anxiety during cold compressor through puppet therapy**. (Marisa Danny, 2006)**

A true experimental study to compare the effectiveness of play therapy and hospital routine in reduction of anxiety among hospitalized children at selected hospital at Bangalore .70 children were selected by convenient sampling technique. Total children were divided to two groups. The experimental group received play therapy and control group received hospital routine. Level of the anxiety was checked by modified Spence children anxiety scale. The finding of the study revealed that in experimental group the mean difference was 20.1 with calculated t value of 13.47 which showed that there was significant effect in reduction of level of anxiety at $p<0.001$ and in control group the mean difference score was 8.8 with t value of 7.8 which also showed significant reduction in level of anxiety at $p<0.001$ level. However play therapy was found to be more effective than hospital routine at level of $p<0.05$ with table value of 5.22**. (Titty Xavier, 2007)**

An experimental study was conducted at a hospital in Zondervan to compare the distraction techniques among 100 children undergoing venipuncture and found that more children are engaged in distraction, regardless of the type of distraction stimuli, they have found that the movies were superior to all other distracters for venipuncture in 88 children ($t=4.12$ at $p<0.05$ level). **(Lases Mather, 2007)**

An experimental study was conducted to assess the effectiveness of video player on levels of anxiety among children undergoing crotherapy at selected general dermatology clinic, Hong gong. The aim of the study was to determine the effectiveness of a portable video player on anxiety levels before cryotherapy for cutaneous viral warts. Children between 2 to 6 years were selected for this study. Children were shown a children's program on a portable video player before cryotherapy. Modified Yale preoperative anxiety scale was used to assess the anxiety level among children. The findings revealed that the percentages of children with a high anxiety score were 86% during the intervention phase and 43% during the intervention phase ($P = .25$)**. (Zahra Shahrivar, 2008)**

A study to assess the effectiveness of play therapy in reducing children's fear and behavioural distress during intramuscular injection was assessed among 30 children ages 3-5 years at the Wimbleton child care centre. The experimental group (2.6±1.10) received play therapy during the time of injection while the control group received routine standard care. The anxiety level was assessed by using Facial Anxiety Scale. The experimental group reported significantly lower fear at p=0;001 level (3.71±0.17) than the control group**.(Lutz Antony,2008)**

A study to assess the effectiveness of virtual reality in reduction of anxiety for the preparation of hospitalization among school children at selected hospital, Karnataka. The aim of the study was to reduce the anxiety level because of

hospitalization. Quasi experimental research design was used. 50 samples selected by using convenient sampling technique. Level of anxiety was checked by using modified Spence children anxiety scale. The experimental group received virtual reality and the control group received routine care. The findings revealed that there was a reduction in the level of anxiety among children who received the distraction technique t= 3.96(tabulated value of t=2.09). The study concluded that virtual reality was effective in preparation of school children for hospitalization and it will help to reduce the anxiety of children regarding hospital environment. **(Krishnan et al, 2009)**

A study was conducted to find the effectiveness of play therapy on anxiety among hospitalized children at Thrisur, Kerala. The aim of the study was to assess the effectiveness of play therapy to reduce anxiety and to improve the interpersonal skills in children. Pre experimental design was used in this study to evaluate the effect of play therapy. Using simple random method 32 children belongs to 6-10 years were recruited in the study. Self administered questionnaire was used. Mean post test anxiety level is lower than 86.87(SD=1.942) than pre test 95.83(SD=1.900). The obtained t value t= 7.782($p<0.05$) was significant. There was a significant reduction in anxiety and improved interpersonal skills after administration of play therapy. The study was concluded that nurse can incorporate play therapy as a part of nursing intervention in dealing with hospitalized children. **(Neena Jaishore, 2010)**

A study was conducted to assess the effectiveness of play therapy on anxiety and distress during intramuscular injection among children at selected hospital, Mexico. Quasi experimental design was adopted for this study. 100 samples were collected by using convenient sampling technique and the data was collected by using observational measurement. The findings of the study were 68% of children had positive behavioral changes towards procedure. The study was concluded that play

activity is the effective therapy for reducing anxiety during medical procedures among children. **(Elizabeth Powell, 2010)**

A study was conducted to find the effectiveness of play therapy in reducing the anxiety of hospitalized children admitting in pediatric ward at Dr. Prabakar Kore hospital, Karnataka. 30 children between 1 to 6 years admitted in pediatric ward were selected for this study. Non probability convenient sampling technique was used for selection of samples. The anxiety level was assessed by the modified Spence children anxiety scale. The post test anxiety level scores was found lower 58.6 compared to with pre test anxiety level score 97. There was a positive difference of 38.9 indicating that anxiety of children is reduced. The mean of anxiety score level was decrease by 13.18 units suggesting post test reduction in standard deviation which indicate positive reduction in anxiety level in subjects. The paired t test was used to test the hypothesis at df (29) = 2.045 at $p< 0.05$. **(Suja. S, 2011)**

An experimental study was conducted to find the effectiveness of preoperative play interventions on post surgery anxiety of Iranian children. The aim of the study was to assess the effectiveness of play activities on the level of anxiety after surgery in an intervention and control group. In clinical trail 75 children aged 5 to 12 enrolled in the intervention and control group. The anxiety symptoms were assessed by using Yale modified preoperative anxiety scale. The results shows that children had a positive changes with a mean score of 2.62±1.8.This study concluded that play therapy has a major value t $p<0.001$ level. **(Narges Alirezaei, 2012)**

An experimental study was conducted to determine the effectiveness of therapeutic play on anxiety among hospitalized preschool children at selected hospitals, Salem. Quasi experimental pre test post test with control group design was adopted for this study. 60 preschool children were selected using purposive sampling

technique. The modified Spence children's anxiety scale was administered to assess the level of anxiety in preschool children. The findings revealed that during pretest, 8(26, 67%) children had mild anxiety and 22(73.33%) of them had moderate anxiety in experimental group. Whereas 11(36.67%) had mild anxiety and 19(63.67%) had moderate anxiety in control group. In experimental group during post test 20 (66.67%) children had no anxiety and 10 (33.33%) had mild anxiety whereas in control group 16(53.33%) children had moderate anxiety and 14(46.67%) had mild anxiety. The post test t value between experiment and control group was 10.99 which was significant at $p<0.001$ level. This study concludes that therapeutic play was an effective intervention in reducing anxiety among preschool children during hospitalization. **(Greeshma Jacob, 2013)**

Section-C: Studies related to effectiveness of play therapy on level of anxiety during nebulization.

A study was conducted to assess the" effectiveness of an electronic toy as a distraction strategy to reduce anxiety in children under going nebulization therapy" at selected asthma clinic, Columbia. The aim of the study was to assess the effectiveness of play therapy on nebulization anxiety. There were selected 29 preschool children (2-5years) from outpatient department who undergoing nebulization by random assignment. Observer ratings collected with the observational scale of behavioral distress. The 't'=3.83 was significant as $p<0.01$ level shows that play therapy was effective in decreasing anxiety and distress of children, aged 2-5 years undergoing nebulization therapy (**Pendle Ling, 2006)**

A study to determine the effectiveness of video game on pediatric nebulization placement among children at selected hospitals, Iran. The aim of the study was to assess the anxiety among children on asthma treatment.70 children were selected for

this study. Experimental stratified random sampling design were used .Distraction used in experimental group and control group receives no distraction. Childhood anxiety sensitive index was used to assess the anxiety levels in children. Demographic information and satisfaction scores were also collected. The mean score of children in experimental group 10.4±1.6 was lower than that of the control group 15.9±1.96. The 't' value was t=12.17was significant at p<0.01 level. The study reveals that Video game was positively endorsed by all participants as an effective strategy for decreasing anxiety and distress during acute medical interventions**. (Gold et al, 2008).**

A descriptive study was conducted to assess the knowledge and practice of mothers and staff nurses on play needs of children in asthma clinic at Philadelphia.100 samples were selected from convenient sampling technique. Data were collected by administering questionnaire and observational checklist to the mothers and staff nurses. The assessment of parents reveals that 99% had adequate knowledge, and 0.93% had moderately adequate knowledge regarding ply needs of children. The assessment of the knowledge of the nursing personal reveals that, 86.111% of them had adequate knowledge and13.89% had moderately adequate knowledge regarding play needs of children. The practice of parents31.48% was adequate and 68.52% were moderately adequate. The practice of nursing personal 97.22% was inadequate and 2.77% of their practice was found to be moderately adequate**. (Whaley, 2009)**

A study was conducted to assess the play therapy as a distraction measure to reduce the anxiety in young children undergoing nebulization therapy at selected hospital, Sydney. 40 children (1-6years) were collected in the study. Experimental randomized controlled trail design was used. Play therapy was given only for experimental group. Observational scale for anxiety were used to rate the anxiety

levels before and after the nebulization treatment. Experimental group's score was lower as compared with the control group, indicating less anxiety 77% of children's parents said that play therapy was helped to distract their children. The 't' value was 2.61 at $p<0.05$ level which shows that play therapy was effective in reducing anxiety and distract that child during nebulization therapy. **(Sender et al, 2009)**

A study was conducted to assess the effectiveness of virtual reality as a distraction technique to reduce the distress prior to nebulizer therapy at selected asthma clinic, Russia. 20 children belong to 4-8years, in that 12 male and 8 females were selected by experimental randomized control trial design. Revised children's anxiety manifest scale was used to assess the level of distress and anxiety. The finding of the study reveals that 92% of children had reduced their distress and anxiety with *t* value 18.67 at $P<0.001$ level. The study concluded that virtual reality distraction provides a significant amount of distress relief to the children undergoing nebulizer therapy**. (Wolitzky et al., 2010)**

A study was conducted to find the effectiveness of distraction, guided imagery on anxiety among children undergoing nebulization in selected hospital, Sweden. Quasi experimental research design was used with 80 children aged 6-10 years who were assigned to experimental and control group. Distraction were given to experimental group were as no intervention for control group. Revised manifest children anxiety scale was used to assess the anxiety level among children. The results shows that the mean anxiety assessment score among experimental group was 9.3±3.3 where as in control group it was 12.7±6. The $t= 3.57$ at $p<0.05$) shows that play therapy was effective in reducing anxiety among children undergoing nebulization. **(Albeit, Misery, 2010)**

A study was conducted to determine the effectiveness of group play on anxiety, adjustments & depression during nebulizer therapy among preschooler, at selected hospital, Canada. A quasi experimental non equalent control Group with post test design was adopted for this study. 40 children were selected by using purposive sampling technique. Yale modified children anxiety scale was used to assess the subjects. The study concluded that the group distraction techniques enhancing positive clinical outcomes with a mean score in experimental group was 15.25_+ 2.13 with a *t* value 16.24 at p<0.001 level. This study revealed that group play was effective for reducing anxiety in children undergoing nebulization. **(Workman, 2011)**

Summary:

This chapter dealt with review of literature related to anxiety, play therapy, and effectiveness of play therapy on anxiety among children undergoing nebulization.

CHAPTER - III

METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure for the gathering valid and reliable data for the purpose of investigation **(Polit And Hungler, 2003)**.

This chapter consists of research design, description of the setting, variables, population, sample size, sampling technique, description of the tool, content validity, reliability, and method of data collection, Pilot study and Plan for data analysis.

The present study aims to assess the Effectiveness of Play Therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

Research Approach:

A research approach is the whole design, including the researcher's assumptions, the process of inquiry, the type of data collected and the meaning of the findings. The quantitative evaluative approach to research involves the use of data collection methods such as questionnaires, structured observations, interviews and a number of other measuring tools**. (Parahoo Kader, 2006).**

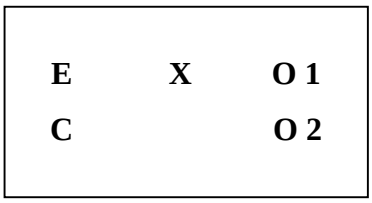
Quantitative evaluative research approach was adopted for this study.

Research Design:

Research design is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study. **(Sharma S.K, 2011)**

Quasi experimental involves the manipulation of an independent variable. Quasi experiments lack either the randomization or control group feature that characterizes true experiments **(Polit and Hungler, 1999).** Quasi experimental design in which post- test only control group design was used in this study to evaluate the

effectiveness of play therapy on level of anxiety among children undergoing nebulization. The design can be represented as,



E : Experimental group.

X : Intervention (Play therapy)

O_1: Post test assessment of experimental group

C: Control group

O_2: Post test assessment of control group.

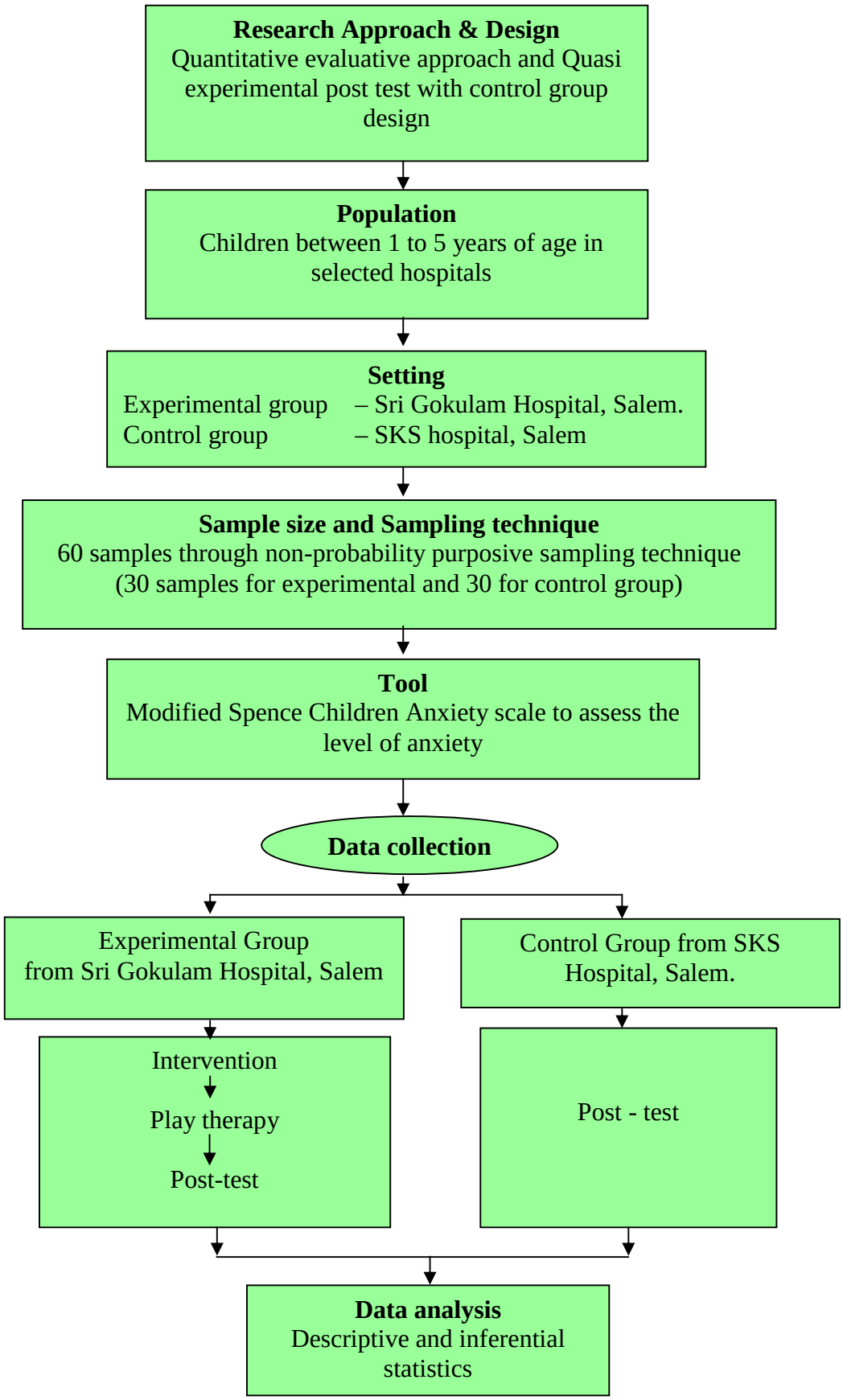


Figure – 3.1: Schematic Representation of Research Methodology

Population:

Population is defined as the entire set of individuals or objects having some common characteristics **(Polit D.F & Beck Tatano Cheryl, 2008).**

The population of the study were the children (1 – 5 years of age) undergoing nebulization in selected hospitals, Salem.

Description of Settings:

Setting is the general location and condition in which data collection takes place for the study **(Polit, D F and Hungler, 2003).**

The study was carried out in paediatric outpatient departments of the selected hospitals. Experimental group was selected from Sri Gokulam Hospital, Salem which was 350 bedded hospital and the turnover of under five children are 6-10 per day for nebulization. The control group was selected from SKS hospital, Salem which was 150 bedded hospital in which the turnover of 5-9 under five children per day for nebulization. Both hospitals are about 10 kms away from Sri Gokulam College of nursing, Salem. The settings were situated in the middle of the city. The settings were selected by using **convenient sampling technique**. These areas were selected based on,

1. Availability of subjects.
2. Economy of time and money access.
3. Feasibility in terms of cooperation extended by the neonatogist and Pediatrician in SKS Hospital and Sri Gokulam Hospital, Salem ,the health team members and the investigators familiarity with the setting in terms of professional experiences.

Sampling technique and sample size:

Sample:

Sample is the subset of population, selected to participate in a study. (**Polit, D.F & Beck Tatano Cheryl, 2008);**

The sample of the study comprises of Children between ages of 1 – 5 years undergoing nebulization in selected hospital.

Sampling technique:

Sampling is the process of selecting a portion of the population to represent the entire population. **(Polit D. F & Beck Tatano Cheryl, 2008)**

The technique adopted for this study was **purposive sampling technique**. Purposive sampling technique is the judgmental or selective sampling that involves the conscious selection by the researcher of certain subjects or elements to include in a study**. (Sharma Suresh K, 2012)**

Sample size:

Sample size is approximately 60 Children

Experimental group = 30

Control group = 30

Variables:

Independent variable:

- Play therapy for children.

Dependent variable:

- Level of anxiety on nebulization.

Criteria for sample selection:

Inclusion criteria:

Children who,

- are between the age group of 1- 5 years.
- come for first time nebulization.
- will come for at least three times a day for nebulization.

Exclusion criteria:

Children who are;

- not willing to participate in the study.
- critically ill.
- mentally challenged.

Description of Tool:

Section –I: (Baseline data)

This section consists of demographic data like age of the child, gender, education of the care giver who stays along with the child during nebulisation, the siblings had any experience of nebulization and previous exposure to hospital.

Section –II:

This section deals with **Modified Spence children anxiety scale.**

This observation made helps to screen the anxiety among the children. It has 20 items in the areas of Appearance, Biological response, social behavior, emotional behavior and adaptation.

Scoring Procedure

The level of anxiety was measured in terms of scores. The total score was 40. Positive items are 7. Negative items are 13. Each statement has three options. The

investigator was put a mark with corresponding boxes according to observation checklist.

Table -3.1: Scoring Procedure on level of anxiety

S.No.	Category	Never	Sometimes	Always
1.	Positive questions	0	1	2
2.	Negative questions	2	1	0

Interpretation:

0-10 : No anxiety.

11-20 : Mild anxiety.

21-30 : Moderate anxiety.

31- 40 : severe anxiety

Validity and Reliability:

Validity:

Validity is the quality of data gathering instrument or procedure that enables it to measure what it is supposed to measure. (**John. W. Best and James V. Kahn)**

Validity of the tool was obtained on the basis of opinion of medical and nursing experts (Two medical experts from paediatrics, five nursing experts from paediatric nursing and one statistician). As per the suggestions received from the experts necessary modifications were made in the tools.

Reliability:

Reliability is the degree of consistency and accuracy with which an instrument measures the attitude for which it is designed to measure**. (Ram Abuja, 2002).**

The reliability of the tool was determined through Inter-rater method among six children (age group 1-5 years) from Aiswaryam Hospital, Salem on 24.7.2013. It

is estimated by administration of tool to observe the level of anxiety simultaneously and independently by two observers on 24.7.2013. The reliability co-efficient was found to be 0.75, which showed that the tool was reliable. Hence the tool was considered for proceeding.

Pilot Study:

Pilot study was conducted from 22.7.2013 to 27.7.2013 to assess effectiveness of play therapy on level of anxiety among children undergoing nebulization. Ten children undergoing nebulization were selected from outpatient departments of selected hospitals through purposive sampling technique. Five children from Aiswaryam Hospital, Salem were assigned to experimental group and five children from Bhavani Hospital, Salem were assigned to control group. Informed consent (oral) taken from parents of samples. Each day the investigator selected 2-3 samples according to the inclusion criteria. The investigator administered play therapy i.e. an audiovisual play model of nebulizer along with sound producing toys, building blocks and colouring were given to experimental group children before 10 minutes of nebulization which continued till the end of nebulization. No intervention was given in control group. Post test anxiety level was assessed in three consecutive times (4^{th} hourly). The anxiety level was assessed by Modified Spence children anxiety scale. The third time of anxiety level was taken as the final post test score in both experimental and control group. The tool was found feasible and practicable and it helped to select suitable statistical method for analysis.

Method of Data Collection:

Ethical consideration:

Written permission was obtained from the authority of the selected hospitals. Informed verbal consent was taken from parents of the children, who were willing to participate in the study.

Period of data collection:

Data was collected over a period of four weeks from 29.7.2013 to 27.8.2013.

Data collection procedure:

The data was collected over a period of 4 weeks. The data was collected after obtaining prior permission from the concerned authority (Managing Director) to conduct the study at SKS and Sri Gokulam hospitals, Salem. Informed consent (oral) taken from parents of samples prior to the data collection.60 children undergoing nebulization were selected from outpatient departments of selected hospitals. The Experimental group (30 children) were selected from Sri Gokulam Hospital, Salem and the Control group (30 children) were selected from SKS Hospital, Salem. The sample that fulfils the inclusive criteria was selected for the study by using purposive sampling technique.

Intervention (Play Therapy):

Good rapport was established with children and their parents. Each day the investigator selected 2-3 samples according to the inclusion criteria. The investigator administered play therapy i.e. an audiovisual play model of nebulizer along with sound producing toys, building blocks, doctors kit and colouring were given to experimental group children before 10 minutes of nebulization which is continued till the end of nebulization. No intervention was given in control group.

Post test:

Post test anxiety level was assessed for three consecutive times (4^{th} hourly). The anxiety level was assessed by Modified Spence children anxiety scale. The third time of anxiety level was taken as the final post test score in both experimental and control group.

Plan for Data Analysis:

Descriptive statistics such as percentage, mean and standard deviation was used to categorize the data. Inferential statistics such as unpaired 't' test was used to find out the effectiveness of play therapy and chi-square was used to associate the level of anxiety with selected demographic variable among children undergoing nebulization in experimental and control group.

Summary:

This chapter dealt with methodology. It consists of research design, description of setting, population and sampling technique, criteria for sample selection and development of study instrument, validity, reliability, pilot study and method of data collection and plan for data analysis. The analysis and interpretation of the study are presented in the following chapter.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Analysis is the process of the organizing and synthesizing the data in such a way that question can be answered and hypothesis tested. **(Polit, D.F and Hungler, 2003)**

This chapter deals with analysis and interpretation of data to Evaluate the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

The findings are presented under the following sections,

Section-A:

Distribution of children according to their selected demographic variables in experimental and control group.

Section-B:

a) Distribution of level of anxiety among children undergoing nebulization according to post test scores in experimental and control group.
b) Comparisons of mean, standard deviation mean difference of post test score on level of anxiety among children undergoing nebulization in experimental and control group.
c) Area wise comparison between the post-test scores on level of anxiety among children undergoing nebulization in experimental group and control group.

Section –C:

a) Effectiveness of play therapy on level of anxiety among children undergoing nebulization in experimental group and control group.
b) Association of level of anxiety among children undergoing nebulization with their selected demographic variables in experimental and control group.

Section-A

Distribution of Children undergoing Nebulization according to their selected Demographic variables in Experimental and Control group.

Table -4.1:

Frequency and Percentage distribution of Children undergoing Nebulization in Experimental and Control group according to the Demographic variables.

n=60

S. No	Demographic variables	Experimental group		Control group	
		f	%	f	%
1.	Age of the child				
	a) 1.1-2.0 years	5	16.7	7	23.3
	b) 2.1-3.0 years	9	30	12	40
	c) 3.1-4.0 years	10	33.3	8	26.7
	d) 4.1-5.0 years	6	20	3	10
2.	Gender of the child				
	a) Male	15	50	18	60
	b) Female	15	50	12	40
3.	Whether the siblings had any experience of nebulization				
	a) Yes	8	26.7	11	36.7
	b) No	22	73.3	19	63.3
4.	Previous exposure to hospital				
	a) Yes	25	83.3	29	96.6
	b) No	5	16.7	1	3.3

Distribution of children according to their age shows that in experimental group, highest percentage of children 10(33.3%) are between 3-4 years of age. In control group, highest percentage of children 12(40%) are between 2-3 years. This

reveals that the highest percentage of children is between 3-4 years of age in experimental group and 2-3 years in control group. (Table-4.1)

Distribution of children according to their gender depicts that in experimental group highest percentage 15(50%) of children are female and 15(50%) are males whereas in control group 18(60%) are males and 12(40%) are females. This reveals that equal percentage of children were male and female in experimental group and highest percentages of children were males in control group. (Table-4.1)

Distribution of children according to the previous experience of nebulization to siblings indicates that in experimental group majority of siblings 22(73.3%) did not have previous experience of nebulization and 8(26.7%) had previous experience where as in control group 19(63.3%) did not have any previous experience of nebulisation and 11(36.7%) had previous experience. This reveals that the highest percentage of siblings did not have any previous experience of nebulization. (Table-4.1)

Distribution of children according to their previous exposure of hospital reveals that in experimental group majority of children 25 (83.3%) had previous exposure of hospital and 5(16.7%) did not have any exposure to hospital where as in control group 29 (96.6%) had previous exposure to hospital and 1(3.3%) did not have any previous exposure to hospital. This reveals that the highest percentage of children have previous exposure to hospital in both groups. (Table -4.1)

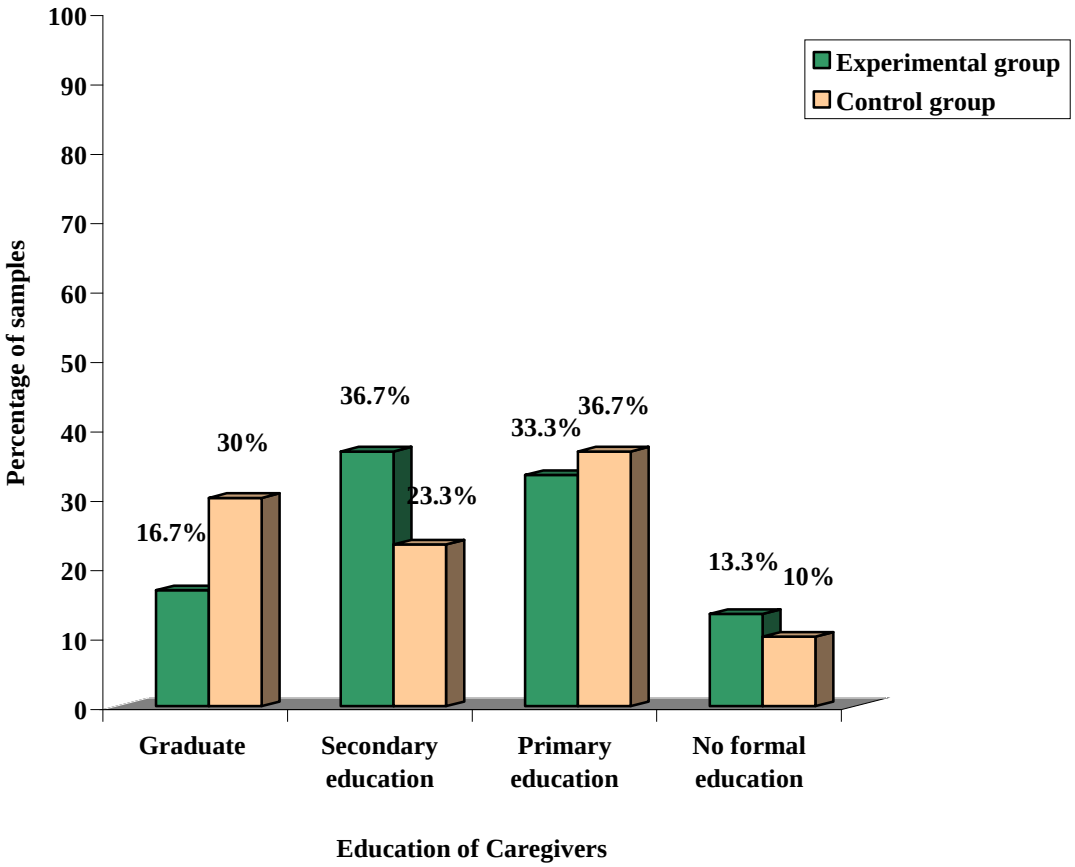


Figure-4.1: Frequency and Percentage distribution of Children undergoing nebulization in Experimental group and Control group according to the Demographic Variables of Care givers.

The above diagram depicts that most of the caregivers of children undergoing nebulization in experimental group 11(36.7%) have studied up to secondary education, 10(33.3%) have studied primary education, 5(16.7%) are graduates and 4(13.3%) do not have any formal education. In control group most of the caregivers of children 11(36.7%) had studied primary education, 9(30%) were graduates, 7(23.3%) have studied up to secondary education, and 3(10%) do not have any formal education.

Section- B

a) Distribution of level of anxiety among Children undergoing Nebulization according to Post test scores in Experimental and Control group.

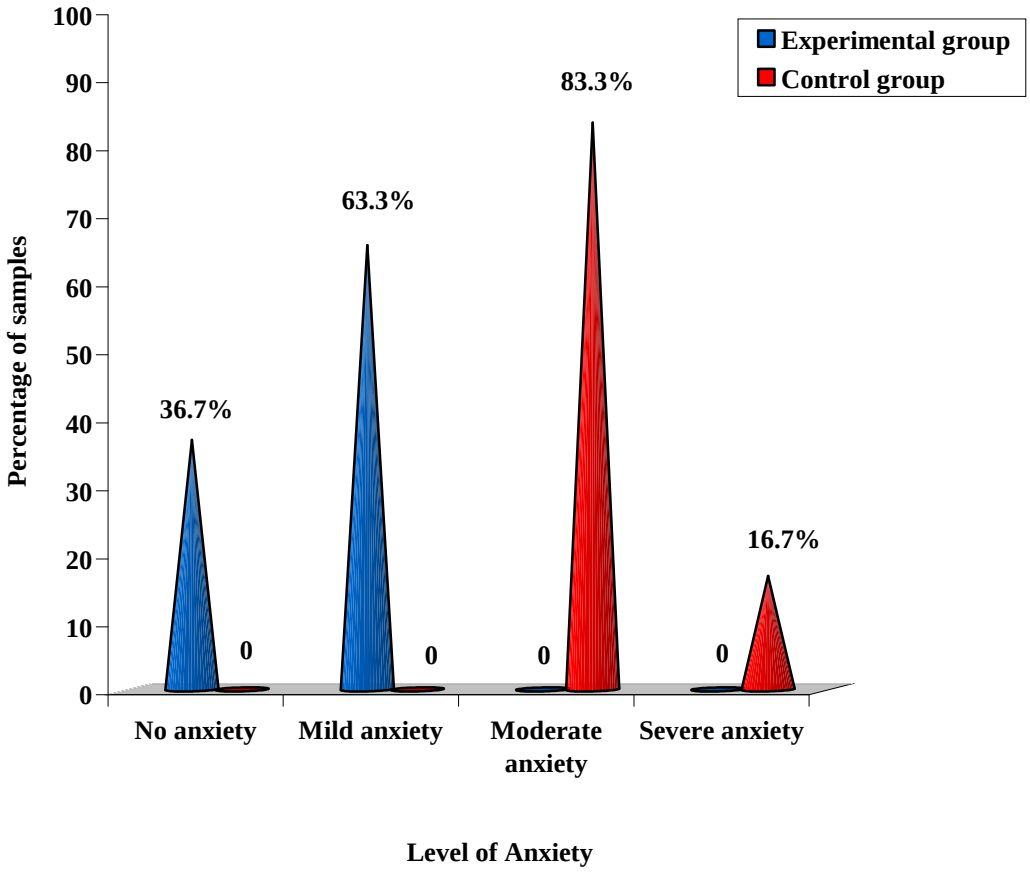


Figure-4.2: Percentage distribution of Children under going Nebulization according to the Post test scores on level of Anxiety in Experimental and Control group.

The above diagram shows that in experimental group during post test, 11(36.7%) children had no anxiety and 19(63.3%) of them had mild anxiety.

In control group 25(83.3%) children had moderate anxiety and 5(16.7%) had severe anxiety

b) Comparison of Mean, SD, Mean difference of post test score on level of Anxiety among Children undergoing Nebulization in Experimental and Control group.

Table - 4.2:

Mean, SD and Mean difference of post test score on level of Anxiety among Children undergoing Nebulization in Experimental and Control group.

n = 60

Groups	Maximum score	Post test			Difference in mean %
		Mean	SD	Mean %	
Experimental group	40	11	3.1	27.5	30.9
Control group	40	23.36	4.19	58.4	

The above table on mean, standard deviation and mean percentage and difference in mean percentage on post test level of anxiety reveals that mean score for experimental group was 11±3.1, which was 27.5% of total score, where as for control group the mean was 23.36±4.19 which was 58.4% of total score, revealing a difference of 30.9 %. The mean difference shows that anxiety is reduced in experimental group than control group.

c) Area wise comparison between the Post test scores on level of Anxiety among Children undergoing Nebulization in Experimental group and Control group.

Table:-4.3:

Area wise Mean, Standard deviation, Mean percentage and Difference in Mean percentage of Post test level of anxiety among Children undergoing Nebulization in Experimental group and Control group.

n =60

Areas of Anxiety	Max. Score	Experimental group			Control group			Difference in mean%
		Post test			Post test			
		Mean	SD	Mean %	Mean	SD	Mean %	
Appearance	8	2.83	1.2	35.37	5.4	1.36	67.5	32.2
Biological response	6	3.2	0.7	53.3	3.53	0.82	58.3	5
Social behaviour	12	2.2	1.2	18.3	7.13	2.02	51.4	33
Emotional behaviour	8	1.3	0.7	16.25	4.36	1.6	53.7	37.5
Adaptation	6	0.96	0.8	16	3.7	1.2	61.6	45.6

Area wise comparison of mean, SD and mean percentage of post test scores in both groups shows that in control group during post test the highest mean score is 5.4±1.36 which is 67.5 % is found in the area of “appearance” where as in experimental group the post test mean score is 2.83±1.2 which is 35.37% of maximum score revealing a difference in mean percentage of 32.2%. However the

lowest mean score 0.96±0.8 which is 16% is obtained in the area of “adaptation” in experimental group but in control group the mean score is 3.7±1.2 which is 61.6% revealing a highest difference in mean percentage of 45.6%. The lowest difference mean percentage is 5% found in the area of “biological response” which may be due to more or less similar mean percentage in experimental and control group (53.3% & 58.3%) respectively. (Table-4.3)

Section C

Hypothesis Testing

a) Effectiveness of Play therapy on level of Anxiety among Children undergoing Nebulization in Experimental group and Control group.

H_1: There will be significant difference in level of anxiety among children undergoing nebulization in experimental group and control group after implementation of play therapy at P≤0.001 level.

Table - 4.4:

Mean, Standard Deviation, 't' value on level of Anxiety among Children undergoing Nebulization in Experimental group and Control group.

n=60

Group	Mean	S.D	't' Value
Experimental group	11	3.1	16.5*
Control group	23.36	4.19	

*** Significant at p≤0.001 level; table value = 3.46; df =58**

The above table reveals that significant difference is found in the post test mean values of level of anxiety among children in experimental and control group. The mean values of post test of experimental group was lower than control group revealing that play therapy was more effective in reducing the level of anxiety among children undergoing nebulization. Hence the research hypothesis H_1 was retained. (p<0.001 level).

b) Association of level of Anxiety among Children undergoing Nebulization with their selected Demographic variables in Experimental and Control group.

H_2: There will be significant association between the level of anxiety among children undergoing nebulization in experimental and control group with their demographic variables at $p \leq 0.05$ level.

Table - 4.5:

Association of level of Anxiety among Children undergoing Nebulization with their selected Demographic variables in Experimental and Control group.

n=60

S. No	Demographic variables	Experimental group (n=30)			Control group (n=30)		
		i^2	Table value	df	i^2	Table value	df
1.	Age of the child	6.08	7.82	3	0.72	7.82	3
2.	Gender of the child	0.14	3.8	1	0.54	3.8	1
3.	Whether the siblings had any previous experience of nebulization	0.64	3.8	1	3.47	3.8	1
4.	Previous exposure to hospital	0.35	3.8	1	5.1*	3.8	1
5.	Education of the care giver who stays along with the child during nebulization	2.34	7.82	3	11.6*	7.82	3

Significant at p< 0.05 level

The above table reveals that in experimental group, there is no significant association between the level of anxiety and the demographic variables. Hence in experimental group the research hypothesis H_2 is rejected ($p > 0.05$ level). In control group, there is an association of level of anxiety with the education of caregiver who stays along with the child during nebulization and previous exposure to hospital. Hence in control group the research hypothesis H_2 is accepted ($p < 0.05$ level) for those two demographic variables only. The other three demographic variables have no association with level of anxiety. So the research hypothesis H_2 is rejected ($P > 0.05$ level for those three demographic variables respectively. (Table No: 4.5)

Summary:

This chapter deals with data analysis and interpretation in the form of statistical values based on the objectives, frequency and percentage on level of anxiety among children undergoing nebulization with their demographic variables in experimental and control group.

The 't' test is used to evaluate the effectiveness of play therapy on level of anxiety among children undergoing nebulization. The chi-square test was used to find out the association between the level of anxiety children with their demographic variables. The result shows that play therapy was effective in reducing the anxiety in children undergoing nebulization.

CHAPTER V

DISCUSSION

The present study was conducted to evaluate the effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem. Quantitative evaluative approach was adopted for this study. Quasi experimental Post test with control group research design with The sample was selected by using purposive sampling technique. The sample comprises of 30 in experimental group and 30 in control group.

Distribution of children undergoing nebulization according to their selected demographic variables in experimental and control group.

A baseline variable of children shows that, highest percentages of children were between 3-4 years of age in experimental group (33.3%) and 2-3 years in control group (40%). In experimental group both sexes were equally 15(50%) present where as in control group highest percentage were males 18(60%). Highest percentage of children's siblings did not have previous experience of nebulization in both experimental22 (73.3%) and control group 19(63.3%). Highest percentage of children had previous exposure to hospital in both experimental 25 (83.3%) and controls 29(96.6%) group. Higher percentage of children's care giver had secondary education 11(36.7%) and11 (36.7%) of children's caregiver had primary education in control group.

The present study was conducted by **Unnikrishnan, (2011)** among hospitalized children between 3-6 years at selected hospitals, Bangalore. Findings shows that in experimental group, 46.6% of children were in 3-4 years of age, 66.6% were male, 73.3% of childrens' siblings did not have previous experience of

nebulization,100% of children had previous experience of hospitalization and 33.3% of mothers had primary education.

Objective-1: To assess post test level of anxiety among children undergoing nebulization in experimental and control group.

In experimental group during post test, 11(34.7%) children had no anxiety and 19(65.3%) of them had mild anxiety with mean score of 11± 3.1. In control group, 25(83.3%) children had moderate anxiety and 5(16.7%) had severe anxiety with mean score of 23.36±4.19.

The finding was supported by a study conducted by **Valarmathi, (2012)** to assess effectiveness of therapeutic play on anxiety and physiological parameters among preschool children undergoing nebulization in selected hospitals, Coimbatore. The results showed that in experimental group 16(80%) had mild anxiety, 4(20%) had moderate anxiety with a mean score of4.5±1.2 and in control group 19(95%) had moderate anxiety, 1(5%) had severe anxiety with mean score of 7.9 ±0.98 revealing that majority of children experience anxiety during nebulization procedure.

Objective-2: To evaluate the effectiveness of play therapy on post test level of anxiety among children undergoing nebulization in experimental group and control group .

There was significant difference found in the post test value of level of anxiety in experimental group. The mean percentage of experimental group (30.9%) was lower than mean percentage of post test of control group (58.4%). The 't' value was 16.5 which was significant at $p<0.001$ level shows that play therapy was highly effective in reducing level of anxiety among children undergoing nebulization .

The present study was supported by **Mary Usha, (2001)** to assess anxiety and physiological parameters for preparation of hospitalization among preschoolers in a

selected hospital, Coimbatore. The 't' value3.96 which was greater than the tabulated value of 2.04 at 5% level of significance. The significant difference in between pre-test and post test in experimental group reveals that video assisted therapeutic play is effective in reducing anxiety among hospitalized preschoolers.

Objective-3: To associate the level of anxiety with selected demographic variable among children undergoing nebulization in experimental and control group.

The present study findings reveals that in control group there is association of anxiety only with the education of caregiver who stays along with the child and previous exposure to hospital ($p<0.05$) but there is no association with other demographic variables. In experimental group there is no association between anxiety and any demographic variables. The research hypothesis H_2 is retained only in control group for those two variables only.

The present study was supported by **Kain, (2009)** to assess the effects of puppet therapy on reducing anxiety, fear and procedure distress among 30 under five children at Toronto. The result showed that there was association between the level of anxiety with age of the children and presence of mother at 0.05 level. The study was concluded that under five children are more vulnerable to get anxiety because of the hospital setting and their developmental stage.

Summary:

This chapter dealt with the discussion of the study with reference to the objective and supportive studies. All the three objectives have been obtained and the research hypothesis were H_1 is retained both in experimental and control group, where as H_2 is retained in only for control group for two variables such as education of caregiver who stays along with the child and previous exposure to hospital.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

This chapter deals with summary, conclusion, implications for nursing practice and the recommendations for further research.

Summary:

The purpose of the study was to determine the effectiveness of play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

A Quasi experimental post test only control group design was used where 60 samples (30 in experimental group and 30 in control group) from Sri Gokulam and SKS Hospital were chosen through purposive sampling technique. Level of anxiety was evaluated by using Modified Spence Children Anxiety Scale.

The data was analyzed using descriptive and inferential statistics to test the hypothesis. The 't' test was used to evaluate the effectiveness of play therapy on level of anxiety among children undergoing nebulization and chi-square was used to find out association between the level of anxiety among children with their demographic variables.

- In experimental group, 10(33.3%) were between 3- 4years of age and in control group, 12(40%) were between 2-3years.
- In experimental group equal percentage of children, were is male 15(50%) and female 15(50%), where as in control group 18(60%) were males and 12(40%) were females.
- In experimental group, 22 (73.3%) and 19(63.3%) of children's siblings did not have any previous experience of nebulization.
- In experimental group, 25(83.3%) and in control group 29(96.6%) children had previous exposure to hospital.

- In experimental group, 11(36.7%) childrens' care giver had secondary education and in control group, 11(36.7%) childrens' care giver had primary education.
- In experiment group during post test 11(34.7%) children had no anxiety and 19(65.3%) had mild anxiety whereas in control group 25(83.3%) children had moderate anxiety and 5(16.7%) had severe anxiety.
- In experimental group the post test mean score was 11± 3.1 and mean percentage was 27.5% of mean score, where as in control group the post test mean score was 23.36±4.19 and mean percentage was 58.4%.
- In experimental group, the difference in mean percentage was 27.5% and in control group, the difference in mean percentage was 58.4%. The mean difference shows that anxiety was reduced in experimental group than in control group.
- The 't' value was 16.5 which was significant at $p<0.001$ level on anxiety among children in experimental and control group. Hence hypothesis (H_1) was retained which revealed that play therapy was highly effective in reducing anxiety among children undergoing nebulization.
- In experimental group there was no association of level of anxiety with any demographic variables. In control group there was an association of level of anxiety with education of care giver and previous exposure to hospital, hence H_2 was retained in control group only for this two demographic variables.

Conclusion:

The study was to determine the effectiveness of play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem. The settings were Sri Gokulam Hospital and SKS Hospital, Salem. The samples were

selected by purposive sampling technique and the sample size was 60, 30 in the experimental group and 30 in the control group. The findings of the study revealed that play therapy was highly effective in reducing level of anxiety among children undergoing nebulization in experimental group. There was significant association found between the level of anxiety with education of care giver and previous exposure to hospital in control group.

Implications:

The findings of the study has implications in different branches of nursing (i.e) nursing practice, nursing education, nursing administration and nursing research. The investigator received a clear picture regarding the different steps to be taken in different fields to improve the same.

Nursing Practice:

- Play therapy can be used effectively by the nurse for reducing the level of anxiety among children undergoing nebulization.
- The nurse practitioner can motivate the parents to provide play therapy to reduce anxiety during nebulization.
- Nurse can incorporate play therapy into their care to facilitate the child's adaptation to the illness and hospital procedures.
- Nurse can use play therapy as an essential component of quality nursing care to prepare children for nebulization.

Nursing Education:

- Nursing education can offer short term continuing nursing education regarding play therapy to nurses caring for children.

- Periodic conferences, workshops, seminars and symposiums can be held for all child health personnel on various techniques of play therapy like model play, interactive puppet shows, sound producing toys and building blocks.
- Nursing educators can encourage the students to bring out various innovative and creative ideas pertaining management of anxiety among children undergoing nebulization.

Nursing Administration:

- The nurse administrator can plan and organize continuing education program and in-service education programs on various play therapy techniques for reducing anxiety among children.
- The nurse administrator can organize the demonstration classes of play therapy among child health nurses.

Nursing Research:

- Nurse researcher can encourage clinical nurses to apply the research findings in their daily nursing care to children who come for nebulisation treatment.
- The findings of the study can be disseminated through conferences, seminars and journals which make the application of the research findings to be effectively used in practice.

Recommendations:

Recommendations for further studies include:

- A study to assess the effectiveness of guided imaginary play on medical invasive procedure among adolescents at selected hospitals.
- A study can be conducted to assess the effectiveness of puppet show in preparing children (1-5 years of age) for nebulization therapy.

- A comparative study can be conducted to evaluate the effectiveness of group play vs videotaped procedures on level of anxiety among hospitalized children.
- A prospective study can be conducted to identify the associated social factors related to anxiety among hospitalized children

Summary:

This chapter dealt with summary, conclusion, implication, for nursing practice and recommendations.

BIBLIOGRAPHY

Books

- Ball Jane, (1995). *Pediatric nursing care for children* (6th edition). America: Appleton and large company.
- Basavanthappa, B.T. (2007). *Nursing Research* (3rd edition). Bangalore: Jaypee Brothers.
- Behrman, (2000). *Nelson text book of paediatrics* (2nd edition). Tokyo: W.B.Saunders Company.
- Bhatia, M.S. (2010). *Essentials of Psychiatry* (6th edition). New Delhi: CBS Publishers.
- Bonita, E. (2009). *Clinical comparison for pediatric Nursing* (1st edition). New York: Clifton Park.
- Christinsan, P.J. (1990). *Nursing process application of conceptual models* (3rd edition). Philadelphia: Mosby Company.
- Datta Parul. (2009). *Pediatric Nursing* (2nd edition). New Delhi: Jaypee Brothers.
- David Shaffer. (1996). *Developmental psychology childhood and adolescence* (4th edition). New York: Books Kole Publishing Company.
- Debra, L, Price, (2008). *Pediatric Nursing and introductory text* (10th edition). St.Louis: Saunders/ Elsevier.
- Ghai,O.P. (2004). *Essential Pediatrics* (6th edition). New Delhi: CBS Publishers.
- Harmer,T. J. (2002).*Parent child interaction* (2nd edition).Boston: North Carolina state university.
- Hocken Berry, M. J. (2009). *Wong's Essentials of Pediatric Nursing* (8th edition). Noida: Elsevier.

- Hunder and Polit. (1999). *Nursing research* (6th edition). Philadelphia: Lippincott Williams.
- Kothari, C.R. (2000). *Research Methodology Methods and Techniques* (1st edition). New Delhi: Vishwa Prakashan (P) Ltd. Lippincott.
- Mahajan, B.K. (2003). *Method in biostatistics* (6th edition). New York: Lordson Publishers (Pvt) Ltd.
- Marlow, R. (2009). *Textbook of Pediatric*. (5th edition). Philadelphia: Elsevier.
- Mary Ann Cantrel. (2011). *Schaum's Outline of Pediatric Nursing*. (6th edition).New York: McGraw Hill.
- Parthasarathy ,A.(2010). *IAP Text Book of Paediatrics* (4th edition). New Delhi: Jaypee Brothers.
- Polit and Beck. (2004). *Nursing research principles and methods* (7th edition). Philadephia: Lippincott.
- Sharma, S. K.(2011). *Nursing research and statistics* (1st edition). New Delhi: Elsevier.
- Sundar Rao. (1999). *An introduction and biostatics annual for students in health science.* India: Prentice Hall.
- Terri Kyle. (2008). *Essentials of Pediatric Nursing*. New Delhi: Wolters Klumer India Private Ltd.

Journals

- Barbara Taylor Cork. (2002)**.** The Efficacy of Play Therapy with Children. *Professional psychology of research and practice*, 35(4), 376-390 .
- Bewer, S. (2006). Paediatric Anxiety: Child life intervention in hospital. *Journal of paediatric nursing*, 12(1) 13-22.

- Busoni, P. et.al., (2004). Anxiety in children: The role of nurse *Journal of pediatric nursing* , 42(3), 401-405.
- Cameron, J.A.(2000). Reducing the anxiety of children undergoing medical procedures. *Journal of paediatric nursing*, 28(10), 51-56.
- Chan, C.S.(2002). The effect of an educational program on the anxiety, *journal of paediatrics* , 11(2), 131-139.
- David, S.D. et al., (2003). Interventions for reduction of anxiety in children. *Children's Health Care*, 18(4), 179-183.
- Fadreri Sharon.(2010). The Efficacy of Play Therapy on Anxiety and Social Maturity. *Journal of Applied Sciences,*10(3), 189-195.
- Gaston, E. Blom. (2012). The Reactions of Children to Illness. *Journal of American Academy of Pediatrics*, 22 (3), 590 -600.
- Laakso, M.L. (2008). The role of play therapy in child hood special education. *International journal of development*, 24(5), 140-144.
- Liang .(2010**).** Reducing Anxiety Levels in Children. *Arch Dermatol*, 148(9), 1001-1004.
- Lynn, S. Liben. (2006).Child development. *Research in child development*, 77(3), 27-30.
- Michael, L.(1998). The power of play. *A discussion about early childhood education*, 21(2), 289- 302.
- Nair. (2002). Play way method. *Indian journal of pediatrics* , 4(2), 140-145.
- Norton Ray. (2001). The effectiveness of play therapy: Responding to the critics. *International journal of play therapy*, 10(1),85-108.
- Smith. (2007).It's child play. *Nursing times*, 82(3),46-52.

Net references

- Aliene, S. Linwood. (2006). Play therapy. Retrieved on January 12 *from http://health.yahoo.net/galecontent/play.*
- Bernstein,E. (2008). Anxiety disorder, separation anxiety and school refusal. Retrieved on Dec 2008 *from http://emedicine.mediscape.com /article/ 916737_overview*.
- Klein Rachel.(2007). Separation anxiety in children and teens. Retrieved on Jan 2 *From www.school behavior.com/conditions_anxiety separation.html.*
- Robinson.(2012).Anxiety in Children. Retrieved on March 25 *from http://www.helpguide.org/mental/separationanxiety/treatment.htm*.
- Salmela Marja.(2010). Hospital-Related Fears and Coping Strategies in 4-6 year old children. Retrieved on September 3 *from https://helda.helsinki.fi/ bitstream/handle.*
- Susan Garofolo. (2011*).* Play therapy for children. Retrieved on June 28 *from www.playtherapyforchildren.com.*
- WHO report.(2011). Population of children in India. Retrieved on March 27 *from http://www.indianchild.com/population_of_india.htm.*

Unpublished thesis:

- Aruna (2004)), A Study To Assess the knowledge, attitude and practice among mothers of hospitalized children regarding play needs at Kovai Medical Center and Hospital, Coimbatore. The Tamil Nadu Dr. M.G.R.Medical University, Chennai.
- Greeshma Jacob (2013), A Study to Evaluate the Effectiveness of Therapeutic Play on Anxiety among Hospitalized Preschool Children in Selected Hospitals, Salem. The Tamil Nadu Dr.M.G.R.Medical University, Chennai.

- Mary Usha(2001)), A Study To Assess the effectiveness of video assisted therapeutic play on anxiety and physiological parameters for the preparation of hospitalization among preschoolers in a selected hospital, Coimbatore. The Tamil Nadu Dr. M.G.R.Medical University, Chennai.
- Unnikrishnan.N.(2010),A Study to assess the Effectiveness of Play Therapy in Reducing Anxiety level among Hospitalised Children in selected hospitals at Bangalore. Rajiv Gandhi University of Health Sciences, Karnataka.
- Valarmathi.S.(2012), A Study to Evaluate the Effectiveness of Therapeutic Play on Anxiety and Physiological parameters Among Preschool Children Undergoing Nebulization In A selected Hospital, Coimbatore. The Tamil nadu Dr.M.G.R.Medical University, Chennai.

ANNEXURE - A

LETTER SEEKING PERMISSION TO CONDUCT A RESEARCH STUDY

From

Ms.Ninu Poulose ,

Final year M.Sc.(N),

Sri Gokulam College of Nursing,

Salem.

To

The Principal,

Sri Gokulam College of Nursing,

Salem.

Respected Madam,

Sub: Permission to conduct Research Project–request- reg.

I, **Ms. Ninu Poulose,** Final year M.Sc(N) student of Sri Gokulam College of Nursing is conducting research project in partial fulfillment of "The Tamilnadu Dr.M.G.R. Medical University, Chennai" as part of the requirement for the award of M.Sc(N). Degree.

Topic: "A Study to Assess the Effectiveness of Play Therapy on Level of Anxiety among Children Undergoing Nebulization in Selected Hospitals, Salem"

I wish to seek permission to conduct the research study at Sri Gokulam Hospital and SKS Hospital, Salem.

Kindly do the needful

Thanking you.

Date: Yours sincerely,

Place: Salem

(Ms. Ninu Poulose)

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550 2272240 2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date .....

LETTER REQUESTING PERMISSION TO CONDUCT THE RESEARCH STUDY

To
The Managing Director,
Sri Gokulam Hospital,
Salem.

Respected Sir,

Sub: Permission to conduct Research Project – request –reg.

Please be informed that the students of our college are to conduct a Research project, which is to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai, as partial fulfilment of University requirement for the award of M.Sc (Nursing) Degree. The names of the students, the area of study and their statements are as follows:

Sl no:	Name of the student	Department	Area of the study	Topic
1.	Ms.Anfy Maria .A.T	Medical and Surgical Nursing	Ward	A study to assess the effectiveness of video assisted teaching programme on knowledge and attitude regarding cardiac rehabilitation among patients with acute myocardial infarction, at selected hospitals, salem.
2.	Ms.Geena George	Medical and Surgical Nursing	Ortho Out Patient Department physiotherapy department	A study to evaluate the effectiveness of isometric exercise on pain among patient with osteoarthritis at selected hospitals, salem.
3.	Ms.Ligi Rachel Daniel	Medical and Surgical Nursing	ICU	"A Study to Evaluate the Effectiveness of Ventilator Bundle On Ventilator Associated Pnemonia among Mechanically Ventilated Patients At Selected Hospitals,Salem."
4.	Ms.Linsa Baby	Medical and Surgical Nursing.	Ward and ICU	"A Study to Evaluate the Effectiveness of Auditory Stimulation on Motor and Verbal Responses among Patients admitted in Intensive Care Unit with Traumatic Brain Injury at Selected Hospitals, Salem"
5.	Ms.Philsy Philip	Medical and Surgical Nursing	ICU	"A Comparative Study to Evaluate the Effectiveness of Stockings Versus Range of Motion Exercises on Deep Vein Thrombosis Among ICU Patients at Selected Hospitals,Salem".
6.	Ms.Ninu Paulose	Paediatric Nursing	Paediatric Ward and Paediatric Out Patient Department.	"A study to assess the Effectiveness of Play Therapy on Level of Anxiety among Children (1-5 years of age) undergoing Nebulization at selected hospitals, Salem."

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

7.	Ms.B.Manjula	Obstetrics and Gynaecological Nursing.	ICU and Ward	"A Study to Evaluate the Effectiveness of Hand and Foot Massage on Pain among Post Caesarean Mothers at Selected Hospitals, Salem."
8.	Ms.A.Sahaya Vivitha	Mental Health Nursing	Ward and Psychiatric Out Patient Department.	"A study to Evaluate the Effectiveness of Structured Teaching Programme on Knowledge regarding Expressed Emotions in Relapse Prevention among Caregivers of Patients with Schizophrenia in a Selected Hospital ,Salem."

I request you to kindly permit them to conduct the above mentioned Research Project in our Hospital from 29-07-13 to 27-08-13 .they will adhere to the policies and regulations of the Hospital.

Thanking You,

Date :17-07-13
Place : Salem

Yours Sincerely,

(Dr.K.Tamizharasi)

18/7/13

ANNEXURE – B

LETTER REQUESTING PERMISSION TO CONDUCT A RESEARCH STUDY

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH STUDY

Date : .....

To

The Managing Director,

SKS Hospital,

Salem.

Respected Sir/Madam,

Sub: Permission to conduct research project- request- reg.

This is to introduce **Ms. Ninu Poulose,** Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing.She is to conduct a research project which is to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, as partial fulfillment of University requirement for the award of M.Sc. (Nursing) Degree.

Topic: A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

I request you to kindly permit her to conduct the research study in your esteemed Institution. She will adhere to the policies and regulations of the Institution.

Thanking you.

Date :

Place : Salem

Yours sincerely,

(DR. K. Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

To HR
Approved. Take Dr. DRS
Consent etc
29/7/13

Forwarded for Approval
M2/29/7/13

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH STUDY

Date : .....

To

The Managing Director,

Aishwaryam Hospital,

Salem.

Respected Sir/Madam,

Sub: Permission to conduct research project- request- reg.

This is to introduce **Ms. Ninu Poulose,** Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing.She is to conduct a research project which is to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, as partial fulfillment of University requirement for the award of M.Sc. (Nursing) Degree.

Topic: A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

I request you to kindly permit her to conduct the research study in your esteemed Institution. She will adhere to the policies and regulations of the Institution.

Thanking you.

Date : 12.07.2013

Place : Salem

Yours sincerely,

(DR. K. Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

Dr. T. MANIVANNAN, M.D., D.C.H., (Paediatrics),
Consultant Paediatrician & Neonatologist,
Reg. No: 44737
AISHWARYAM SPECIALITY HOSPITAL
23/7/2013

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH STUDY Date : .....

To

The Managing Director,

Bhavani Hospital,

Salem.

Respected Sir/Madam,

Sub: Permission to conduct research project- request- reg.

This is to introduce **Ms. Ninu Poulose,** Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing.She is to conduct a research project which is to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, as partial fulfillment of University requirement for the award of M.Sc. (Nursing) Degree.

Topic: A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem.

I request you to kindly permit her to conduct the research study in your esteemed Institution. She will adhere to the policies and regulations of the Institution.

Thanking you.

Date :

Place : Salem

Yours sincerely,

(DR. K. Tamizharasi)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

Permitted

Dr. S. Arunachalam, M.D., D.C.H.,
CONSULTANT IN CHILD HEALTH
BHAVANI HOSPITAL, SALEM-636 004.
Regd. No. 2 0107

ANNEXURE – C

LETTER REQUESTING OPINION AND SUGGESTIONS OF EXPERTS FOR CONTENT VALIDITY OF THE RESEARCH TOOL

From

Ms.Ninu Poulose,
Final Year M.Sc., (N)
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

To,

(Through proper channel)

Respected Sir/ Madam,

Sub: Requesting opinion and suggestions of experts for establishing content validity of the tool.

I **Ms. Ninu Poulose,** II Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, Salem, have selected the below mentioned Statement of the Problem for the research study to be submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai as partial fulfillment for the award of Master of science in Nursing.

Topic: "A Study to Assess the Effectiveness of Play Therapy on Level of Anxiety among Children Undergoing Nebulization in Selected Hospitals, Salem"

I request you to kindly validate the tool developed for the study and give your expert opinion and suggestion for necessary modifications.

Thanking you,

Place : Salem
Date :

Yours sincerely,

Ms. Ninu Poulose

Enclosed:

1. Certificate of validation
2. Tool for collection of data
3. Criteria checklist for evaluation of tool
4. Intervention

ANNEXURE – D

TOOL FOR DATA COLLECTION

The data was collected by using Modified Spence children anxiety scale;

Section- I: Demographic data.

Section- II: Modified Spence children anxiety scale.

Section –I

Sample No: ☐

Date :

Instructions:

The investigator will ask question listed below and put the (✓) mark against the response given by the mothers of children.

1. Age of the child (in years)
   - a) 1.1 - 2.0 ( )
   - b) 2.1- 3.0 ( )
   - c) 3.1 - 4.0 ( )
   - d) 4.1 - 5.0 ( )

2. Gender of the child
   - a) Male ( )
   - b) Female ( )

3. Whether the siblings had any experience of nebulization
   - a) Yes ( )
   - b) No ( )

4. Previous exposure to hospital
   - a) Yes ( )
   - b) No ( )

5. Education of the caregiver who stays along with the child during nebulization
   - a) Graduate ( )
   - b) Secondary education ( )
   - c) Primary education ( )
   - d) No formal education ( )

SECTION - II

MODIFIED SPENCE CHILDREN ANXIETY SCALE

- To assess the level of anxiety among children between 1-5 years undergoing nebulization.
- The investigator will put (✓) mark in the corresponding boxes according to the observation made.

S.No	Features	Never	Sometimes	Always
I	**Appearance**			
1	Active or alert*			
2	Shy or timid			
3	Looks irritable			
4	Frightened			
II	**Biological response**			
5	The child maintains normal body temperature*			
	1 -5 years (37c \ 98.4 F)			
6	The child maintains normal pulse rate*			
	1-5years (80- 120 beats \ min)			
7	The child maintains normal respiratory rate*			
	1-5 years (20- 30 breath\ min)			
III	**Social behavior**			
8	Avoids talking with stranger			
9	Maintains good eye contact while interacting*			
10	Pushes the nurse away			
11	Interacts with the nursing staffs*			

12	Crying or cling to care giver while seeing the nurse who provides nebulization			
13	Hide away from nurse			
1V	**Emotional behavior**			
14	Shows separation anxiety			
15	Restless			
16	Aggression towards people around			
17	Exhibits temper tantrum			
V	**Adaptation**			
18	Cries during nebulization			
19	Not obeying the commands			
20	Child cooperates well during nebulization*			

*POSITIVE ITEMS

NEGATIVE ITEMS

Scoring interpretation:

It includes positive and negative items

POSITIVE ITEMS		NEGATIVE ITEMS	
Never	- 0	Never	- 2
Some times	- 1	Sometimes	- 1
Always	- 2	Always	- 0
SCORE = 7x 2 = 14		SCORE = 13x 2= 26	

Total score = 40

To interpret level of anxiety , the score interpreted as follows:

0 - 10 : No anxiety

11-20 : Mild anxiety

21-30 : Moderate anxiety

31- 40 : Severe anxiety

PROCEDURE FOR PLAY THERAPY

Play therapy is an individual therapy developed to assess the needs of children in therapy. It is a way to communicate the children to express their feelings, to reduce anxiety, distress and to help them adjust to the hospital procedures.

GOALS:

- Promote optimum development
- Reduces the psychological trauma
- Cope up with hospital procedures

PURPOSES:

- Provides a means for release of tension
- Provide diversion
- Reduces the anxiety regarding medical procedures
- Help the children to cope up with hospital procedures
- Minimize the hospital adjustment problems

ARTICLES NEEDED:

- Audio visual model of car nebulizer
- Sound producing toys
- Building blocks
- Colouring paper
- Crayons
- Doctor's kit

PROCEDURE:

- Explain the procedure to the parents
- Obtain oral consent from parents
- Assess the anxiety level using modified Spence children anxiety scale

- Before and during the nebulization therapy - give play model of car nebulizer
  - give sound producing toys
  - give building blocks to create house, car
  - give doctors kit
- After the nebulization therapy - give pictures and crayons for colouring

AFTER CARE:

After the intervention , the children were allowed to follow routine nursing care.

ANNEXURE- E

LIST OF EXPERTS

1. **Dr. R. Ramalingam, M.D., DCH, F.A.A.P. (USA)**
   Pediatric Consultant,
   Sri Gokulam Hospital,
   Salem.
2. **Dr. D.V.Suresh, DNB, DCH**
   Consultant Pediatrician and Neonatologist,
   SKS Hospital,
   Salem.
3. **Prof. Dr. Maheswari, Ph.D (N).,**
   Vice Principal,
   Vinayaka Mission Annapoorna College of Nursing
   Salem.
4. **Mrs.C.Kavitha, M.Sc (N).,**
   HOD of Child Health Nursing Dept.,
   Shanmuga College Of Nursing,
   Salem.
5. **Mrs.N.Viljayalakshmi, M.Sc (N).,**
   Professor,
   KG College Of Nursing,
   Coimbatore.
6. **Mrs.A.Latha, M.Sc(N).,**
   Associate Professor,
   Department of Child Health Nursing,
   Vivekananda College of Nursing,
   Tiruchengode.
7. **Mrs.Kavitha, M.Sc (N).,**
   Assistant Professor,
   Shri B M Patil College Of Nursing,
   Bijapur.

ANNEXURE - F

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **" A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem".**

Signature :

Name :

Designation :

Seal :

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature :

Name :

Designation :

Seal :

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Signature :

Name : D.V. SUNITHA

Designation : Consultant Pediatrics.

Seal :

Dr. D. SUNITHA, DCH, DNB, PhD
Consultant Pediatrician &
N...
Reg...

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature : K. Mahajan

Name :

Designation : Vice Principal

Seal :

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature : C. Kanilli

Name : C. Kanilli

Designation : Professor cum HOD

Seal : Shanmuga College of Nursing Salem - 7.

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature : N. Vijayalakshmi
Name : N. Vijayalakshmi
Designation : Professor
Seal :

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature :
Name : A. Latha.
Designation : Asso. Professor
Seal :

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.NINU POULOSE,** Final year M.Sc Nursing student Sri Gokulam College of Nursing, Salem (Affiliated to Dr.M.G.R. Medical University) is validated by the undersigned, can proceed with this tool and conduct the main study for dissertation entitled **"A study to assess the Effectiveness of Play therapy on level of anxiety among children undergoing nebulization in selected hospitals, Salem"**

Signature :

Name : Mrs. K. KAVITHA. M.Sc.

Designation : Assoc. Professor.

Seal :

ANNEXURE – G

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

Certified that the dissertation paper titled **"A study to evaluate the Effectiveness of Play therapy on level of anxiety among Children undergoing nebulization in Selected Hospitals, Salem, by Ms. NINU POULOSE** It has been checked for accuracy and correctness of English language used in presenting the paper is lucid, unambiguous free of grammatical or spelling errors and apt for the purpose.

31/12/2013
Signature with Date
Dr. Sr. Eiji P.P
Lecturer,
Morning Star College
Angamaly.

ANNEXURE – H

FORMULAS USED IN THE STUDY

Reliability of the tool

Reliability of the tool was measured by inter rater method among six children. This is estimated by administration of tool to observe single event simultaneously and independently by two or more trained observers.

Reliability computed by using the equation:

$$r = \frac{\text{Number of agreements}}{\text{Number of agreements + Number of disagreements}}$$

Formula for mean

Formula for mean is

$$\bar{x} = \frac{\Sigma fx}{N}$$

Here

$\bar{x}$ = mean

x = variable

f = frequency

N = Σf = Total frequency

Formula for Standard deviation

Formula for standard deviation is

$$\pm = \sqrt{\frac{\Sigma x^2}{N} - \left(\frac{\Sigma x}{N}\right)^2}$$

σ = standard deviation

Here N, = Total number of observation

Formula for Unpaired 't' test

$$t = \frac{\overline{x_1} - \overline{x_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n}}}$$

$$S = \sqrt{\frac{\Sigma\left(x_1 - \overline{x_1}\right)^2 + \Sigma\left(x_2 - \overline{x_2}\right)^2}{n_1 + n_2 - 2}}$$

Test for association of attributes

$$\text{Test statistics } (\chi^2) = \sum \frac{(O-E)^2}{E} \sim \chi^2_{(m-1)(n-1)}$$

Here,

'm' denotes the number of raws, n denotes the number of columns of m ×n contingenancy table

O denotes observed frequency

E denotes the expected frequency

ANNEXURE – I

PHOTOS


Pulmo-Mist
NEBULIZER
JLM ACURA